

CLAIMS

1. An adduct comprising $MgCl_2$, ethanol and Lewis base (LB) different from water, said compounds being present in molar ratios defined by the following formula $MgCl_2 \bullet (EtOH)_n(LB)_p$ in which n is from 2 to 6 and p has values satisfying the following equation $p/(n+p) \leq 0.1$.
2. The adduct according to claim 1 in which p has values satisfying the following equation $p/(n+p) \leq 0.0125$.
3. The adduct according to claim 1 in which the LB is selected from ethers, esters, and compounds of formula RX_m where R is a hydrocarbon group having from 1 to 20 carbon atoms X is a -NH₂, a -NHR or -OH group and m is 1 or higher.
4. The adduct of claim 3 in which the compound RX_m is selected from the group consisting of methanol, propanol, isopropanol, n-butanol, sec-butanol, tert-butanol, pentanol, 2-methyl-1-pentanol, 2-ethyl-1-hexanol, phenol, 4-methyl-1-phenol, 2,6-dimethyl-1-phenol, cyclohexanol, cyclopentanol, ethylen glycol, propylene glycol, 4-butanediol, glycerine, mannitol, polyvinyl-alcohol, acetonitrile, ethylenediammine, 3-picoline, triethanolamine, triethylamine, diisopropylamine.
5. The adduct according to claim 1 having a fusion enthalpy lower than 100 J/g.
6. A catalyst component for the polymerization of olefins comprising the product of the reaction between a transition metal compound and an adduct according to anyone of the preceding claims.
7. A catalyst component according to claim 6 in which the transition metal is selected among titanium compounds of formula $Ti(OR)_nX_{y-n}$ in which n is comprised between 0 and y; y is the valence of titanium; X is halogen and R is an alkyl radical having 1-8 carbon atoms or a COR group.
8. A catalyst component according to claim 7 in which the titanium compound is selected among $TiCl_3$, $TiCl_4$, $Ti(OBu)_4$, $Ti(OBu)Cl_3$, $Ti(OBu)_2Cl_2$, $Ti(OBu)_3Cl$.
9. A catalyst component according to claim 10 in which the reaction between the transition metal compound and the adduct is carried out in the presence of an electron donor compound.
10. A catalyst component according to claim 13 in which the electron donor is selected from esters, ethers, amines, and ketones.
11. Catalyst for the polymerization of olefins comprising the product of the reaction between a catalyst component according to one of the claims 7 to 10, and an aluminum alkyl compound.

12. Process for the polymerization of olefins of formula $\text{CH}_2=\text{CHR}$, in which R is hydrogen or a hydrocarbon radical having 1-12 carbon atoms, carried out in the presence of the catalyst according to claim 11.